



Highgate

TH 4 (Machia Rd.) Bridge 25

Highgate Bridge 25 — BO 1448(43)

Project Location: Town of Highgate in Franklin County on TH 4 (Machia Rd.) over the Missisquoi River. The bridge is located approximately 175-feet west of the intersection of VT 78 and TH4 (Machia Rd).

PROJECT MILESTONES

Preliminary Plans

Spring 2016

Final Design

Spring 2017

Bid Advertisement

Spring 2018

Contract Award

Summer 2018

Target Construction Schedule

Construction Season '18 or '19

The Highgate TH4 Bridge 25 project will replace the existing bridge, which is in poor condition, with a new bridge on a new, downstream alignment. The existing bridge is a two span, two lane structure which was constructed in 1928. The bridge is 292-feet in length. The existing bridge superstructure (deck and Steel truss) is composed of concrete slab deck, supported by built up steel members, both of which are in poor condition. There are areas of significant concrete spalling in the deck, heavy section loss from rust in the floor beams, and heavy collision damage to the top lateral bracing in the eastern portal. Additionally, differential settlement in the substructure is separating the abutment stem from the back wall.

VTrans has evaluated various alternatives for the replacement of Highgate TH4 Bridge 25. The criteria assessed for the proposed design included the roadway alignment, right of way impacts, wetland and archaeological resources, aesthetic requirements, bridge railing, and hydraulics. Several alternatives were considered including no action, repair and rehabilitation, superstructure replacement, and full bridge replacement. Given the poor condition of both the superstructure and substructure components, it was recommended that a full bridge replacement be undertaken.

The new bridge will be two spans each of which being composed of a paved concrete deck on steel girders. The new structure will be of a similar length (approximately 290 -feet) and widened to meet the minimum shoulder requirements per code. The new bridge railing will feature galvanized 2-rail box beam guardrail meeting state standards.

The new bridge will be constructed on a new alignment from the existing bridge.



Collision damage to the top lateral bracing of the eastern portal



Target Construction Schedule: It is anticipated that construction activities will take place in 2018 or 2019.

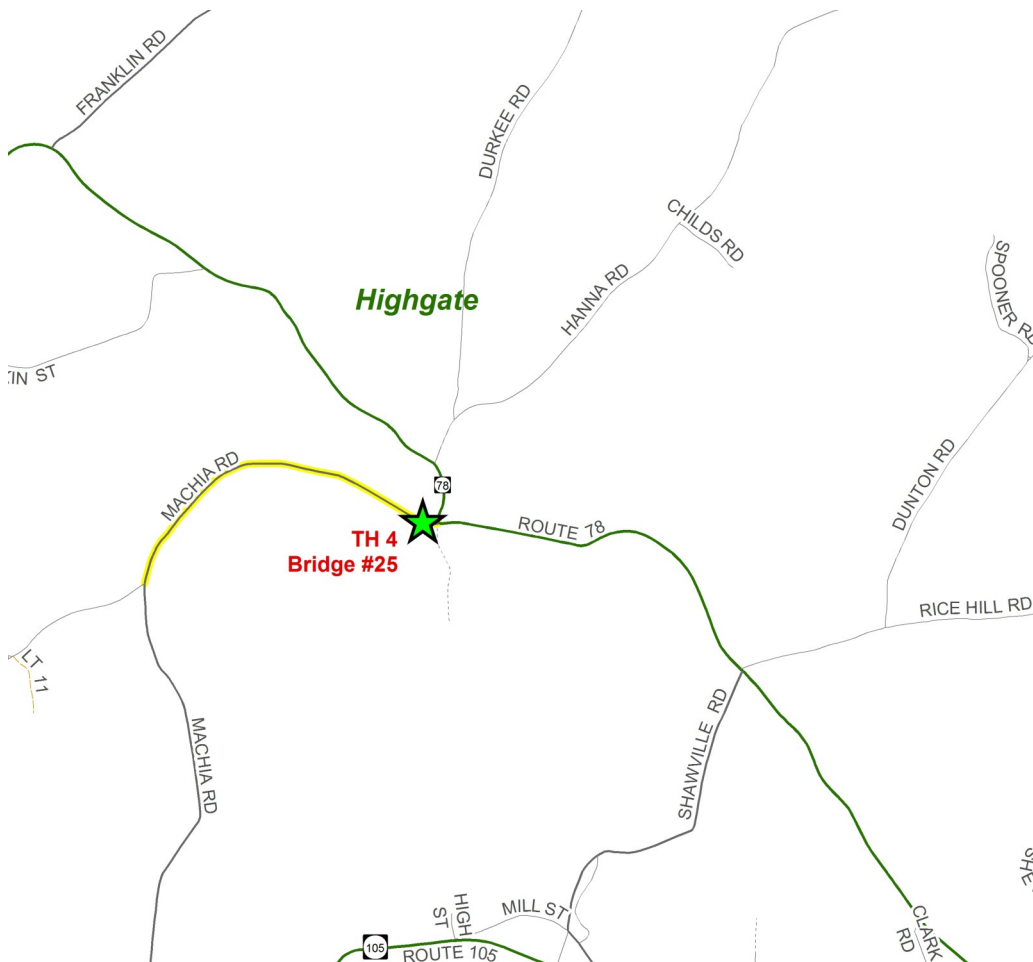
Contractor: TBA

Cost: TBA

VTrans Resident Engineer: TBA

VTrans Project Manager: Doug Bonneau, P.E.

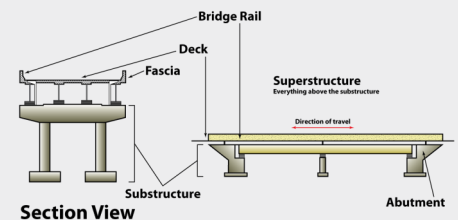
Accommodations for Traffic During Construction: The existing bridge will remain in service as much as possible during construction of the new off-alignment bridge.



East abutment slide and settlement failure



Corrosion of the superstructure



Section View



<https://www.facebook.com>



<https://twitter.com/511VT>

[For more details, click here.](#)